

Index to Volume 5

A

Absorption spectroscopy, of chromium(III) complexes, 127-150
2-Acetonaphthone, as sensitizer, in exothermic energy transfer, 355-359
Acrolein, cycloaddition reactions and charge distribution in, 254-255
Actinometer, 1,3-cyclohexadiene photodimerization as, 367-369
Adamantanethione, flash photolysis study of, 361-365
Aldehydes, photocleavage, CIDNP study, 105-109
photoreductions, CIDNP study, 102-105
Alkyl carbonyl compounds, highlights in 1972 literature, 477-478
Amines, fluorescent properties, 517-535
Aniline, photooxidation of, dyes as sensitizers of, 77-81
Anils, photochromic, 39-60
Azirines, photochemistry of, 242-243
Azo compounds, decomposition, CIDNP study, 118-121
Azulene effect, in cis-trans photoisomerization of stilbenes, 227-229, 231-234

B

Baird, N. C., 209-221
Benzalaniline, photoisomerization of, 427-437
Benzaldehyde, SCF molecular orbital calculations, 209-221
Benzophenone, SCF molecular orbital calculations, 209-221 as sensitizer in 1,3-cyclohexadiene photodimerization, 367-369
Benzoylferrocene, photochemistry in hydroxylic solvents, 457-469
Bonneau, R., 61-67, 361-365
Boron compounds, highlights in 1972 literature, 510

C

Carassiti, V., 457-469
Carbenes, reactions, nuclear spin polarization, 113-118
Chapelon, R., 77-81
Charge distribution, of α,β -unsaturated ketones, 253-259
Charge-transfer phenomena, rate constant for, correlation with rate constant for fluorescence quenching, 69-76
Chloro-2-pyridones, photodimerization and photoisomerization, 371-409
Chromium complexes, as catalysts for norbornadiene dimerization, 195-208

highlights in 1972 literature, 497-499
 photochemistry of, 127-150
Chrysochoos, J., 1-10
CIDNP, 91-126
 aldehyde and ketone photo-
 reactions, 101-109
 azo compound decomposition,
 118-121
 carbene reactions, 113-118
 diaroyl peroxides, de-
 composition of, 95-101
 radical ion reactions,
 110-113
Cobalt complexes, highlights in
 1972 literature, 499-500
 with *o*-phenanthroline, photo-
 oxidation-reduction
 reaction, 11-20
Condorelli, G., 443-455
Coordination compounds, high-
 lights in 1972 literature,
 497-515
Copper complexes, highlights
 in 1972 literature, 504
Costanzo, L. L., 443-455
Cycloaddition reactions, of
 thiobenzophenones at long
 wavelengths, 339-354
 of α,β -unsaturated ketones,
 253-259
Cycloheptatriene, photochemistry
 of, 327-337
1,3-Cyclohexadiene, benzophenone-
 sensitized photodimerization,
 as a chemical actinometer,
 367-369
Cyclopentadienone, SCF molecular
 orbital calculations, 209-221

D

Dalton, J. C., 471-495
David, P. G., 21-37
De Mayo, P., 339-354, 361-365
De Violet, P. F., 61-67

Diaroyl peroxides, decomposition
 of, CIDNP study, 95-101
Diazirines, photochemistry of,
 242-243
Dienones, highlights in 1972 liter-
 ature, 486-487
 photochemistry of, 236-238
 α -Diketones, highlights in 1972
 literature, 487
Dilling, W. L., 371-409
Dimethylnitrosamine, photolysis
 of, esr study, 439-441
1,3-Diphenyl-2-pyrazolines,
 spectroscopic studies in low-
 temperature glasses, 411-425
Diradical, 243-244
Disulfides, highlights in 1972
 literature, 490
Dyes, as sensitizers of aniline
 photooxidation, 77-81
Dynamic nuclear polarization,
 chemically induced (CIDNP),
 applications, 91-126

E

Electrostatics, to differentiate
 between symmetry-allowed
 processes, 327-337
Emission spectra, of 1,3-diphenyl-
 2-pyrazolines in low-tempera-
 ture glasses, 411-425
Emission spectroscopy, of
 chromium(III) complexes,
 127-150
Enones, photochemistry of, 236-238
Esters, highlights in 1972 literature,
 483-484
Exciplexes, 246-247
 nonfluorescent, present during
 fluorescence quenching, 261-285

F

Ferrocene, highlights in 1972
 literature, 506-507

Fischer, E., 227-229
 Fischler, L., 497-515
 Flash photolysis, with lasers, of adamantanethione, 361-365
 with lasers, of aqueous iodine solutions, 61-67
 Fluorescence quenching, non-fluorescent exciplexes present during, estimation of lifetimes and binding energies of, 261-285
 rate constant for, correlation of with rate constant for charge-transfer phenomena, 69-76
 Fluorescence spectra, of 1,3-diphenyl-2-pyrazolines in low-temperature glasses, 411-425
 of L-(-)-tryptophan in solution, 1-10
 Formaldehyde, cycloaddition reactions and charge distribution in, 255-256

G

Giuffrida, S., 443-455
 Givens, R. S., 235-249
 Gray, H. B., 165-178, 179-193

H

Halpern, A. M., 517-535
 Hammond, G. S., 165-178, 179-193, 367-369
 Herndon, W. C., 253-259
 Hexatriene, photochemistry of, 333-336
 Hill, B., 195-208
 Hydrocarbons, aromatic, highlights in 1972 literature, 474-477
 Hydrocarbons, saturated, fluorescent properties, 517-535

I

Infrared spectra, of substituted tungsten carbonyl complexes, 181-182
 Iodine, laser flash photolysis of aqueous solutions, 61-67
 Iridium complexes, highlights in 1972 literature, 501
 Iron complexes, highlights in 1972 literature, 501-502
 Iron(III) chelates, with 1,10-phenanthroline, photoredox chemistry in methanolic solution, 21-37

J

Jakubowski, E., 439-441
 Jennings, W., 195-208
 Joussot-Dubien, J., 61-67, 361-365

K

Kanamaru, N., 427-437
 Kelly, J. M., 497-515
 Ketones, photocleavage, CIDNP study, 105-109
 photoreductions, CIDNP study, 102-105
 Ketones, aromatic, highlights in 1972 literature, 481-483
 Ketones, α,β -unsaturated, cyclo-addition reactions and charge distributions in excited states of, 253-259
 highlights in 1972 literature, 484-486
 Ketones, β,γ -unsaturated, highlights in 1972 literature, 478-481
 Kimura, K., 427-437
 Kirk, A. D., 127-150
 Kirsch, P., 497-515
 Koerner von Gustorf, E., 497-515

Krull, I. S., 83-89

L

- Laser flash photolysis, adamantanethione study by, 361-365
- of aqueous iodine solutions, 61-67
- Lawrence, A. H., 361-365
- Leaver, L. H., 411-425
- Lechtken, P., 235-249
- Lewis, C., 261-285
- Lubit, L., 327-337
- Ligand field excited states, model for substitutional reactivity of, 165-178
- Luminescence, of substituted tungsten carbonyl complexes, 185-186

M

- Manganese complexes, highlights in 1972 literature, 504
- Mariano, P. S., 235-249
- Math, K., 195-208
- Metal carbonyl compounds, highlights in 1972 literature, 505-510
- Meyer, A. Y., 39-60
- Mitchell, A. B., 371-409
- Moggi, L., 11-20
- Molecular orbital calculations, for polyenones, 209-221
- Monochloro-2-pyridones, photodimerization and photoisomerization, 371-409

N

- Naphthalene, nucleophilic and electrophilic substitution of, 238-239
- Nickel complexes, as catalysts for norbornadiene dimerization, 195-208

highlights in 1972 literature, 504

- Niemczyk, M. P., 69-76
- Nitrogen complexes, highlights in 1972 literature, 507
- Nitrogen compounds, highlights in 1972 literature, 488-489
- Norbornadiene, dimerization using transition metal complexes as catalysts, 195-208
- Nuclear magnetic resonance, CIDNP spectra, 91-126
- Nuclear spin polarization, in carbene reactions, 113-118

O

- Olefins, highlights in 1972 literature, 471-473
- Ottolenghi, M., 39-60

P

- 1,4-Pentadien-3-one, SCF molecular orbital calculations, 209-221
- Perichet, G., 77-81
- o*-Phenanthroline-cobalt(III) complex, photooxidation-reduction, 11-20
- 1,10-Phenanthroline-iron(III) chelates, photoredox chemistry in methanolic solution, 21-37
- Photochromism, anils, studies on salicylidene-aniline and salicylidene-*o*-toluidine, 39-60
- Photocleavage, of aldehydes and ketones, CIDNP study of, 105-109
- Photocyclodimerization, of α,β -unsaturated ketones, 253-259
- Photodimerization, of 1,3-cyclohexadiene as a chemical actinometer, 367-369
- energy-wasting processes in

exothermic energy transfer during, 355-359
of norbornadiene, 195-208
of 2-pyridone and its monochloro derivative, 371-409
Photofragmentations, 239-242
Photoisomerization, of benzalaniline, 427-437
energy-wasting processes in exothermic energy transfer during, 355-359
of 2-pyridone and its monochloro derivative, 371-409
of stilbenes, azulene effect, 227-229, 231-234
of thiocinnamamide, 443-455
Photolysis, of dimethylnitrosoamine, esr study, 439-441
Photooxidation, of aniline, dyes as sensitizers of, 77-81
Photooxidation-reduction of tris(*o*-phenanthroline)-cobalt(III) ion, direct and sensitized, 11-20
Photorearrangements, 239-242
Photoredox chemistry, of oxobridged dinuclear iron(III)-1,10-phenanthroline chelates in methanolic solution, 21-37
Photoreduction, of aldehydes and ketones, CIDNP study of, 102-105
Photosubstitution reactions, from ligand field excited states of transition metal complexes, 165-178
of tungsten carbonyl complexes, 179-193
Pillsbury, D., 195-208
Platinum complexes, highlights in 1972 literature, 504
Polyenes, highlights in 1972 literature, 473-474
Polyenones, SCF molecular orbital calculations, 209-221
Pouyet, B., 77-81

Pyridine-tungsten carbonyl complexes, photoprocesses in, 179-193
2-Pyridone, photodimerization and photoisomerization, 371-409

Q

Quantum organic photochemistry, SCF molecular orbital calculations for polyenones, 209-221
Quantum yield, model for predicting, for transition metal complexes, 151-163
procedure for determination of, 223-225
Quenching. See Fluorescence quenching

R

Radical ions, reactions, CIDNP in, 110-113
Redox reactions, of oxobridged dinuclear iron(III)-1,10-phenanthroline chelates in methanolic solution, 21-37
tris(*o*-phenanthroline)cobalt(III) ion, 11-20
Refractive index, of cylindrical cells, effect on exposure and dose of photochemical systems contained in, 287-309
Rhodium complexes, highlights in 1972 literature, 501
Riboflavin, fluorescence quenching in, 505
Rosenfeld, T., 39-60
Rossi, R., 457-469
Roth, H. D., 91-126
Ruthenium complexes, highlights in 1972 literature, 502-503

S

Sabbatini, N., 11-20

INDEX TO VOLUME 5

Salicylideneaniline, photolysis of, 39-60
 Salicylidene-o-toluidine, photolysis of, 39-60
 Saltiel, J., 231-234
 Schore, N. E., 69-76
 Schultze, H., 223-225
 Shetlar, M. D., 287-309, 311-326
 Shizuka, H., 339-354
 Snyder, J. J., 471-495
 Sostero, S., 457-469
 Stern-Volmer equation, for photochemical systems in which two reactive excited states are quenched and reversible energy flow occurs between excited states, 311-326
 Stilbenes, azulene effect in cis-trans photoisomerization of, 227-229, 231-234
 Styrylpypyridine-tungsten carbonyl complexes, photoprocesses in, 179-193
 Substitutional reactivity, of ligand field excited states of transition metal complexes, 165-178
 Sulfur compounds, highlights in 1972 literature, 489-490

T

Tefertiller, N. B., 371-409
 Tetrahydronaphthalene, formation of, 339-354
 Thiobenzophenone, cycloaddition at long wavelength, mechanism, 339-354
 Thiocinnamamide, photoisomerization of, 443-445
 Thioketones, highlights in 1972 literature, 489
 Thiones, photochemistry of, 339-354, 361-365
 Transition metal complexes, as catalysts for norbornadiene

dimerization, 195-208
 model for predicting photo-reactions and relative quantum yields of, 151-163
 model for substitutional reactivity of ligand field excited states, 165-178
 Traverso, L., 11-20, 457-469
 Trienones, highlights in 1972 literature, 486-487
 Triplet energy transfer, energy-wasting processes in, 355-359
 Tris(o-phenanthroline)cobalt(III) ion, photooxidation-reduction reactions, 11-20
 L-(-)-Tryptophan, fluorescence spectra of in solution, 1-16
 Tungsten carbonyl complexes, substituted, photoprocesses in, 179-193
 Turro, N. J., 69-76, 235-249

U

Ultraviolet spectra, of substituted tungsten carbonyl complexes, 182-185

V

Vapor-phase photochemistry, mercury-sensitized, 83-89
 Vesley, G. F., 367-369
 Voecks, G., 195-208
 Vogel, H. R., 223-225

W

Wan, J. K. S., 439-441
 Ware, W. R., 261-285
 Wehry, E. L., 21-37
 West, R. M., 209-221
 Wrighton, M., 165-178, 179-193

Z

Zink, J. I., 151-163

